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10/594,838

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Yoshimi Tomita

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EXAMINER

GUPTA, PARUL H

ART UNIT

PAPER NUMBER

2627

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,838	<b>Applicant(s)</b> TOMITA, YOSHIMI	
	<b>Examiner</b> PARUL GUPTA	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Takemura et al., US Patent 6,078,559.

Regarding claim 25, Takemura et al. discloses in figure 2 an information recording medium on which record information is recorded by forming a record mark (shown in figure 10), wherein additional information is recorded by changing an average area of the record mark included in each predetermined first cycle, in comparison with a predetermined reference value (column 11, line 48 to column 12, line 2), and the additional information is phase-modulated and recorded (column 1, lines 40-50).

Regarding claim 26, Takemura et al. discloses in figure 2 the information recording medium according to claim 25, wherein the record information is recorded in synchronization with a synchronization signal which appears in each predetermined second cycle (column 3, lines 40-45), and the additional information is recorded, by using the second cycle of the synchronization signal as the first cycle (column 3, lines 35-50).

Regarding claim 27, Takemura et al. discloses in figure 2 the information recording medium according to claim 26, wherein the additional information is recorded,

by using a cycle of a timing signal which is generated on the basis of the synchronization signal as the first cycle, instead of using the second cycle as the first cycle (column 3, lines 39-47).

Regarding claim 28, Takemura et al. discloses in figure 2 the information recording medium according to claim 26, wherein the synchronization signal is a synchronization block which is included in a synchronization frame which is an information unit for recording the record information (column 3, lines 35-50).

Regarding claim 29, Takemura et al. discloses the information recording medium according to claim 25, wherein at least one portion of said information recording medium comprises a PEP area in which PEP information is recorded by combining a mark area in which a plurality of record marks are formed and an unrecorded area in which the record mark is not found (column 1, lines 40-67), and the additional information is recorded by changing the average area of the plurality of record marks in the mark area (column 11, line 48 to column 12, line 2).

Regarding claim 30, Takemura et al. discloses the information recording medium according to claim 25, wherein the additional information is recorded by changing at least one of an average length and an average width of the record mark in the each predetermined first cycle (column 11, line 48 to column 12, line 2).

Regarding claim 31, Takemura et al. discloses the information recording medium according to claim 30, wherein the additional information is recorded by changing at least one of the average length and the average width such that at least one of the

Art Unit: 2627

average length and the average width becomes long or short (column 11, line 48 to column 12, line 2).

Regarding claim 32, Takemura et al. discloses the information recording medium according to claim 25, wherein a plurality of same additional information are repeatedly recorded (column 5, lines 8-11).

Regarding claim 33, Takemura et al. discloses an information reproducing apparatus for reproducing the record information recorded on said information recording medium according to claim 25 on which record information is recorded by forming a record mark wherein additional information is recorded by changing an average area of the record mark included in each predetermined first cycle, in comparison with a predetermined reference value (column 11, line 48 to column 12, line 2), and the additional information is phase-modulated and recorded (column 1, lines 40-50), said information reproducing apparatus comprising a reproducing device for reproducing the record information and obtaining a reproduction signal (column 2, lines 20-26); an integrating device for obtaining an integrated value of the reproduction signal in the each first cycle obtained by said reproducing device ("control signal" is the integrated value as given from column 9, lines 5-8); and a generating device for generating the additional information on the basis of the integrated value obtained by said integrating device (incorporated into the "control signal" which is the integrated value as given from column 9, lines 5-8).

Regarding claim 34, Takemura et al. discloses the information reproducing apparatus according to claim 33, wherein the record information is recorded in

Art Unit: 2627

synchronization with a synchronization signal which appears in each predetermined second cycle (column 3, lines 39-47), said information reproducing apparatus further comprises a synchronization signal detecting device for detecting the synchronization signal (figures 7C and column 10, lines 5-10 explain how the sync signal is in a frame to be read, or detected), and said integrating device obtains the integrated value ("control signal" is the integrated value as given from column 9, lines 5-8), by using the second cycle of the synchronization signal detected by said synchronization signal detecting device as the first cycle (used during reading stage).

Regarding claim 35, Takemura et al. discloses the information reproducing apparatus according to claim 34, wherein said integrating device obtains the integrated value ("control signal" is the integrated value as given from column 9, lines 5-8), by using a cycle of a timing signal which is generated on the basis of the synchronization signal detected by said synchronization signal detecting device as the first cycle (column 4, lines 55-60), instead of using the second cycle as the first cycle.

Regarding claim 36, Takemura et al. discloses the information reproducing apparatus according to claim 33, wherein said integrating device resets the integrated value in the each first cycle (as the "control signal" is constantly updated, it is constantly resetting the value as given in column 9, lines 5-8).

Regarding claim 37, Takemura et al. discloses the information reproducing apparatus according to claim 33, wherein at least one portion of said information recording medium comprises a PEP area in which PEP information is recorded by combining a mark area in which a plurality of record marks are formed and an

Art Unit: 2627

unrecorded area in which the record mark is not formed (column 1, lines 40-67), and the additional information is recorded by changing the average area of the plurality of record marks in the mark area, in comparison with the reference value (column 11, line 48 to column 12, line 2), said reproducing device obtains a PEP signal by reproducing the PEP information in the PEP area, and said integrating device obtains an integrated value of the PEP signal by using a cycle in each which the PEP information is detected as the first cycle, instead of or in addition to obtaining the integrated value of the reproduction signal in the each first cycle (column 7, lines 1-8 and column 8, lines 50-60 explain how these signals are also created and detected instead of the reproduction signal initially).

Regarding claim 38, Takemura et al. discloses the information reproducing apparatus according to claim 33, wherein a plurality of same additional information are repeatedly recorded on said information recording medium (column 5, lines 8-11 and 60-65), said information reproducing apparatus further comprises a plurality of storing devices (guard data regions and VFO regions), each of which is for adding the integrated value obtained by said integrating device in each of the plurality of same additional information repeatedly recorded and for storing it therein, and said generating device generates the additional information on the basis of the added integrated value (incorporated into the "control signal" which is the integrated value as given from column 9, lines 5-8).

Regarding claim 39, Takemura et al. discloses the information reproducing apparatus according to claim 38, wherein said integrating device resets the added

Art Unit: 2627

integrated value (as the “control signal” is constantly updated, it is constantly resetting the value as given in column 9, lines 5-8), in at least one case of a case where the integrated value stored in each of the plurality of storing devices is larger than a predetermined threshold value and a case where a certain time elapses (as the updating is constant, it accounts for the time elapsed).

Regarding claim 40, Takemura et al. discloses an information reproducing method of reproducing the record information recorded on said an information recording medium on which record information is recorded by forming a record mark, wherein additional information is recorded by changing an average area of the record mark included in each predetermined first cycle, in comparison with a predetermined reference value (column 11, line 48 to column 12, line 2), and the additional information is phase-modulated and recorded (column 1, lines 40-50), said information reproducing method comprising: a reproducing process of reproducing the record information and obtaining a reproduction signal (column 2, lines 18-25); an integrating process of obtaining an integrated value of the reproduction signal in the each first cycle obtained by said reproducing process (“control signal” is the integrated value as given from column 9, lines 5-8); and a generating process of generating the additional information on the basis of the integrated value obtained by said integrating process (information regarding type of information as given in column 11, line 48 to column 12, line 2).

Regarding claim 41, Takemura et al. discloses an information recording apparatus for recording record information onto an information recording medium, said information recording apparatus comprising: a recording signal generating device for



Art Unit: 2627

generating a recording signal for forming a record mark onto said information recording medium, on the basis of the record information (column 8, lines 25-50); an additional signal adding device for adding an additional signal to the recording signal (information regarding type of information as given in column 11, line 48 to column 12, line 2), the additional signal indicating additional information which is recorded by changing an average area of the record mark in each predetermined first cycle, in comparison with a predetermined reference value (column 11, line 48 to column 12, line 2); and a recording device for recording the record information and the additional information by forming the record mark while changing the average area (column 11, line 48 to column 12, line 2), on the basis of the recording signal to which the additional signal is added, wherein the additional information is phase-modulated and recorded (column 1, lines 40-50).

Regarding claim 42, Takemura et al. discloses the information recording apparatus according to claim 41, wherein said information recording apparatus further comprises a synchronization signal generating device for generating a synchronization signal which appears in each predetermined second cycle (column 4, lines 55-60), said recording signal generating device generates the recording signal for forming the record mark in synchronization with the generated synchronization signal (column 11, lines 1-6), and said additional signal adding device adds the additional signal, by using the second cycle as the first cycle (information regarding type of information as given in column 11, line 48 to column 12, line 2).

Regarding claim 43, Takemura et al. discloses the information recording apparatus according to claim 42, wherein said additional signal adding device adds the additional signal (information regarding type of information as given in column 11, line 48 to column 12, line 2), by using a cycle of a timing signal which is generated on the basis of the synchronization signal as the first cycle (column 4, lines 55-60).

Regarding claim 44, Takemura et al. discloses the information recording apparatus according to claim 41, wherein said recording device forms the record mark by irradiating laser light on the basis of a predetermined driving pulse, and irradiates the laser light while changing at least a pulse width of the driving pulse on the basis of the recording signal to which the additional signal is added (column 10, lines 44-60).

Regarding claim 45, Takemura et al. discloses an information recording method of recording record information onto an information recording medium, said information recording method comprising: a recording signal generating process of generating a recording signal for forming a record mark onto said information recording medium, on the basis of the record information (column 8, lines 25-50); an additional signal (information regarding type of information as given in column 11, line 48 to column 12, line 2) adding process of adding an additional signal to the recording signal, the additional signal indicating additional information which is recorded by changing an average area of the record mark in each predetermined first cycle, in comparison with a predetermined reference value (column 11, line 48 to column 12, line 2); and a recording process of recording the record information and the additional information by forming the record mark while changing the average area, on the basis of the recording

Art Unit: 2627

signal to which the additional signal is added (column 11, line 48 to column 12, line 2), wherein the additional information is phase-modulated and recorded (column 1, lines 40-50).

Regarding claim 46, Takemura et al. discloses a computer program product in a computer-readable medium for tangibly embodying a program of instructions executable by a computer provided in an information reproducing apparatus, said computer program product making the computer function as at least one portion of a reproducing device, an integrating device, and a generating device, said information reproducing apparatus for reproducing the record information recorded on an information recording medium on which record information is recorded by forming a record mark (column 8, lines 25-50), wherein additional information (information regarding type of information as given in column 11, line 48 to column 12, line 2) is recorded by changing an average area of the record mark included in each predetermined first cycle, in comparison with a predetermined reference value (column 11, line 48 to column 12, line 2), and the additional information is phase-modulated and recorded (column 1, lines 40-50), said information reproducing apparatus comprising: said reproducing device for reproducing the record information and obtaining a reproduction signal (column 8, lines 25-50) said integrating device for obtaining an integrated value of the reproduction signal in the each first cycle obtained by said reproducing device ("control signal" is the integrated value as given from column 9, lines 5-8); and said generating device for generating the additional information on the basis of the integrated value obtained by said integrating

Art Unit: 2627

device (incorporated into the "control signal" which is the integrated value as given from column 9, lines 5-8).

Regarding claim 47, Takemura et al. discloses a computer program product in a computer-readable medium for tangibly embodying a program of instructions executable by a computer provided in an information recording apparatus, said computer program product making the computer function as at least one portion of a recording signal generating device, an additional signal adding device, and an recording device, said information recording apparatus for recording record information onto an information recording medium, said information recording apparatus comprising: said recording signal generating device for generating a recording signal for forming a record mark onto said information recording medium, on the basis of the record information (column 8, lines 25-50); said additional signal adding device for adding an additional signal to the recording signal (information regarding type of information as given in column 11, line 48 to column 12, line 2), the additional signal indicating additional information which is recorded by changing an average area of the record mark in each predetermined first cycle, in comparison with a predetermined reference value (column 11, line 48 to column 12, line 2); and said recording device for recording the record information and the additional information by forming the record mark while changing the average area on the basis of the recording signal to which the additional signal is added (column 11, line 48 to column 12, line 2), wherein the additional information is phase-modulated and recorded (column 1, lines 40-50).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARUL GUPTA whose telephone number is (571)272-5260. The examiner can normally be reached on Monday through Thursday, from 10 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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